1. The NED plan (Alt. 3c) maximizes net benefits at $3,555,000 annually. In going to the recommended plan (Alt. 3E), average annual net benefits are reduced by $247,000 because of increased costs of $314,000 and additional benefits of $67,000. Based on the information in the report, the primary reasons for recommending Alternative 3E over 3C is that induced flooding would be minimized, and Avon would be protected from the 100-year event. We also note that the recommended plan has the highest permanent rights-of-way requirements, highest potential impact on cultural resources, and relocates four more residences than the NED plan. Based on the data presented by the GDM, the NED plan appears to be the best alternative because little is gained for a $247,000 average annual loss in benefits. Therefore, we feel that the district should strengthen the rationale presented for selecting the recommended plan.

2. The Standard Project Flood (SPF) discharge at Sedro Wolley is 397,000 second-feet. The final GDM should address the economic feasibility of providing SPF protection for urban areas. The district should be referred to EC 1105-2-86 for guidance. The district should carefully evaluate providing SPF protection in urban areas in light of OCE's policy to provide the highest level of protection that is economically feasible. Also, additional flood protection measures such as Sauk Storage and the Avon By-pass, appear unlikely. Therefore, we strongly suggest that the district consider recommending SPF protection if it is economically justified.

3. The GDM and EIS presently recommend a plan that OCE has ruled is beyond the discretionary authority of the Chief of Engineers. Although authorization of this plan may be provided by Congress in the near future, OCE indicates that they would process the report in a normal manner in the event that this does not occur. Accordingly, the GDM and EIS must be revised to support staged construction that can be started in FY 1980 and result in a completed project also protecting Burlington. OCE feels that the 1-5 bridge is the approximate upstream limit to OCE's authority to approve changes in scope. Support of the authorized stage will require the GDM and EIS to show that a plan downstream of 1-5 is complete within itself, to display impacts, and to show added provisions to accommodate future upstream work are economically justified at 3-1/4% by flood damage reduction under the authorized stage. Support of the unauthorized stage will require the GDM to show at 6-7/8% that a plan upstream of 1-5 is incrementally justified including consideration that flood damages would be increased in the area protected by the authorized stage. The benefits and costs at 6-7/8% should be provided in the letter of transmittal for the authorized portion of the recommended plan.

4. To permit an independent review, the economic evaluation appendix should describe the damageable property in the flood plain in quantitative terms. Presenting the number of units and acres, representative values by category, and depth-damage relationships, would be valuable. An example of benefit determination for one reach should be presented, concluded with a table showing by several exceedance intervals: total damages, damages with the project, damages without the project, and damages prevented.

5. The final GDM should present the economic evaluation for at least three subareas. This analysis should demonstrate that it is economically feasible to provide flood damage reduction for each separable subarea: left bank of the main river and South Fork, left bank of North Fork and right bank of South Fork, and right bank of the main river and North Fork. This incremental justification is in addition to the analysis discussed in para. 3. We also recognize that we must consider the problem.
of induced flooding when a levee is constructed on one bank. For this reason, the
district may choose to recommend maintaining equal levels of protection on adjacent
banks without an economic analysis as described above. Such a recommendation must
be supported in the final GDM as to why this economic analysis of subareas is not
appropriate.

6. The proposed Skagit River levees are designed to contain the 50-year event in
the Stanwood area. The recent Section 205 reconnaissance study indicates that
100-year protection from Stillaguamish flows is warranted. We assume that Skagit
flows may cause urban damages in Stanwood. Accordingly the final GDM should clearly
show the relationships between the two flood damage reduction plans. As a minimum
the discussion should consider equal levels of urban flood protection from the two
rivers, provision of SPF protection and economic justification of the recommended
Skagit levees providing protection to Stanwood.

7. The GDM states that the average annual damages from the Samish River are not
reflected in the economic analysis (see page F-7, paragraph 8). If this is the case,
the benefits for all alternatives should be recalculated to accurately present the
benefits. Does the levee design consider Samish River flooding? What is the 100-
year flood plain with each detailed alternative?

8. We note that an item of local cooperation contained in the authorizing document
has been dropped. The GDM should explain why the locals need not "secure the water
rights necessary for operation of the recommended works for recreational purposes."
The remaining items of local cooperation should duplicate those presented in the
Board report on the authorized project. The addition of the requirement to comply
with uniform relocation assistance and Real Property Acquisition policies (PL 91-645
and PL 91-611) is appropriate.

9. In accordance with ER 1105-2-351, the flood control benefits for project year
50 to 100 must be held constant. Table F-6 and other related areas must be changed
to comply with this regulation.

10. Paragraph 9, page F-7, should more fully explain why the areas of induced
damages are not included in the proposed levee project.

11. We are awaiting implementing instructions on the President's cost sharing policy.
OCE proposes that the district note the results of this policy in their letter of
transmittal. The GDM itself would not discuss the cost sharing policy.

12. In order to meet the requirements of the Water Resource Council review, the
GDM should address, as a minimum, the items listed on the inclosed "Partial Checklist
for WRC Review."

13. The main report should have a section that lists the Fish and Wildlife Service
recommendations and a discussion on how the district proposes to fulfill the requests.
The final GDM must clearly quantify the mitigation requirements in costs and physical
units for both the authorized and unauthorized portions of the plan. Note that if
additional land acquisition is required for mitigation, this would also require
additional authority and cost sharing.
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14. The Coastal Zone Management Act requires agencies developing projects in the coastal zone to address the CZM Act with respect to consistency. The final report should indicate that the District has done this.

15. Exhibit 35 - The district's review comments on the draft Fish and Wildlife Service Report should be deleted. This letter contains data that has since been revised. The data does not agree with the correct data contained in the environmental statement.

16. Page D-97, Section 5.19, indicates that the primary discussion of fish and wildlife mitigation is contained in the environmental statement. This should be revised to indicate that the mitigation plan with the Fish and Wildlife Service recommendations are discussed in the main report.

17. Draft EIS:
   a. The draft EIS is too voluminous and contains detail that should have been left in the GDM. The statement as prepared defeats the purpose of having the two documents bound as one report. For example, sections 2 (Environmental Setting) and 3 (Land Use) comprise 78 pages of approximately 140 pages of statements. The "without" discussion and land use should be detailed in the report or in appendices to the statement with summary discussions in the EIS.
   b. Page 11 - The sites for shrub habitat restoration in Table 1-3 should be checked. The locations for the first two sites do not agree with those identified on page D-96.
   c. Page 12, Section 1.04.5 - The rationale for proposed fish and wildlife mitigation should not be in project description. This should be in Section 4 in the discussion of impacts.
   d. Page 13 - We question the legality of the Memorandum of Agreement identified in the last sentence of the second paragraph. Since the plantings will be on state-owned land and Skagit County will maintain the project after completion, it would appear that any agreement should be between the state and the local sponsor.
   e. Page 15, Section 1.07 - The discussion of specific time schedules for construction should be deleted since this project is still subject to initial construction funding by Congress.
   f. Page 76, Section 3.02.6 - The consistency requirements of the Coastal Zone Management Act should be addressed in this section.

18. Appendix E, Recreation Appendix. There are several problems with the recreation aspects of this report. Comments contained in paragraphs b, c, d, and e below raise some serious questions regarding the propriety and economic feasibility of recreation development in conjunction with the proposed project. Assuming these can be resolved, adding recreation as a project purpose may not be required to permit Federal cost sharing with the locals (see paragraph a below). If, however, recreation must be added as a project purpose to permit Federal cost sharing, then the recreation development cannot be included in either authorized plan discussed in paragraph 3 above.
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a. The Memorandum for the Chief of Engineers referenced under paragraph 2, page E-1, presents current policy with respect to Corps participation in recreation at local flood protection projects. One of the provisions of that policy states that the non-Federal entity must acquire in its name and dedicate to public outdoor recreation use for the economic life of the basic project, all lands required for recreation development and needed to insure public control of the development. The policy also makes provision for appropriate credit towards the 50% non-Federal share of recreation costs for the value of the lands so provided. However, a later policy letter, also referenced under paragraph 2 on page E-1, states that in order for credit to be granted to non-Federal entities for lands provided at reservoir and nonreservoir projects for recreation, recreation must be an authorized purpose. Hence it is solely upon the basis of that letter that Seattle District is recommending the inclusion of recreation as a project purpose, which would constitute an SPAC. We recommend that the district immediately prepare a letter report requesting an exception to the reference policy letter. This would permit Federal cost sharing with the locals without adding recreation as a purpose. If NPS still wants to include recreation as a purpose, then recreation should be included in the "SPAC" plan.

b. While existing policy would allow the Corps to participate in the development of access, parking, potable water, sanitary facilities, and so forth, the underlying assumption is that these are necessary support facilities for the recreation features provided in conjunction with the basic flood control project, i.e. levee hiking and bicycle trails, etc. In the case at hand, the three areas proposed for recreation development are owned by the local sponsor and are already being used for recreation. Further, there are no plans to incorporate recreation into the basic flood control project. Generally speaking, it seems that these areas have no apparent relation to the project, but are related solely to the river. Therefore, the final GDM must establish any relationship between the basic flood control project and the recreation development being recommended.

c. In paragraph 14, page E-7, it is stated that "For purposes of cost benefit determination, the initial visitor design load was calculated at 23,000 visitors, the difference between current visitation (149,000 in 1978) and projected visitation 3 years following project completion (172,000 in 1987)." In order for this to be true, it must be assumed that existing use levels would remain constant until the project is completed in 1984. However, as shown in Table E-5, this assumption has not been made, nor would such an assumption be justified. Thus the figure that must be dealt with is the difference between the with and without condition. That information should be used in the final GDM.

d. Pages E-9 and E-10. Although the GDM presents calculations of design load and facility requirements, nowhere in the report are these compared with existing facilities in the study area. This, there is no way to assess whether there is a surplus or deficit of facilities. It is essential that such information be provided in order to evaluate recreation development proposals.

e. Page E-17, paragraph 22. As discussed in preceding comment (c), the visitation upon which benefits are being claimed (23,000 visitors) is in error. Further, this increase in visitation is projected to occur within the study area as a whole, which currently has 13 existing recreation areas. There is no reason to believe that all 23,000 visitors would be attracted only to the three recreation
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sites proposed for improvements. In addition, the monetary value used in computing the recreation benefits is questionable. Proposed improvements primarily entail such things as paving existing access roads and parking areas, providing sanitary facilities, some landscaping, and signing. No "bonafide" recreation facilities are being proposed. Thus, proposed improvements basically involve the upgrading of existing facilities and hence, the quality of the recreation experience. Therefore, the benefit value should be that value representing the difference between the user day value without improvements and the user day value with improvements.

1 Incl
as
D. E. OLSON
Chief, Planning Division
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<tr>
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<th>PARTIAL CHECKLIST FOR WRC REVIEW</th>
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<tbody>
<tr>
<td>1.</td>
<td>Compliance with Principles and Standards. <strong>Yes</strong></td>
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<td>2.</td>
<td>Compliance with planning manual (under preparation). <strong>?</strong></td>
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<td>3.</td>
<td>Compliance with Federal laws, regulations and guidelines. <strong>Yes</strong></td>
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<td>4.</td>
<td>Public participation. <strong>Yes</strong></td>
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<td>5.</td>
<td>Alternative plans. <strong>Yes</strong></td>
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<td>6.</td>
<td>Alternative futures. <strong>?</strong></td>
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<td>7.</td>
<td>Wild, scenic and recreational rivers. <strong>Yes</strong></td>
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<td>8.</td>
<td>Description of benefit methodologies. <strong>Yes</strong></td>
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<td>9.</td>
<td>Beneficial effects of utilization of unemployed and underemployed resources. <strong>Yes</strong></td>
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<td>10.</td>
<td>Cost estimates and contingency factors. <strong>Yes</strong></td>
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<tr>
<td>11.</td>
<td>Interest during construction. <strong>Yes</strong></td>
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<tr>
<td>12.</td>
<td>Operation and maintenance, replacement costs and annual project cost. <strong>Yes</strong></td>
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<td>13.</td>
<td>Environmental statutes. <strong>Yes</strong></td>
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<td>14.</td>
<td>Relationship to regional plans. <strong>Yes</strong></td>
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<td>15.</td>
<td>Water conservation. <strong>N/A</strong></td>
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<td>16.</td>
<td>New policy directions. <strong>Yes</strong></td>
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<td>17.</td>
<td>Distribution of beneficiaries. <strong>Yes</strong></td>
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<td>18.</td>
<td>Safety. <strong>Yes</strong></td>
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<td>19.</td>
<td>Cost sharing and cost allocations. <strong>Yes</strong></td>
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<td>20.</td>
<td>International or intergovernmental problems. <strong>None</strong></td>
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<tr>
<td>21.</td>
<td>Mitigation, compensation and enhancement. <strong>Yes</strong></td>
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